FIG. 1

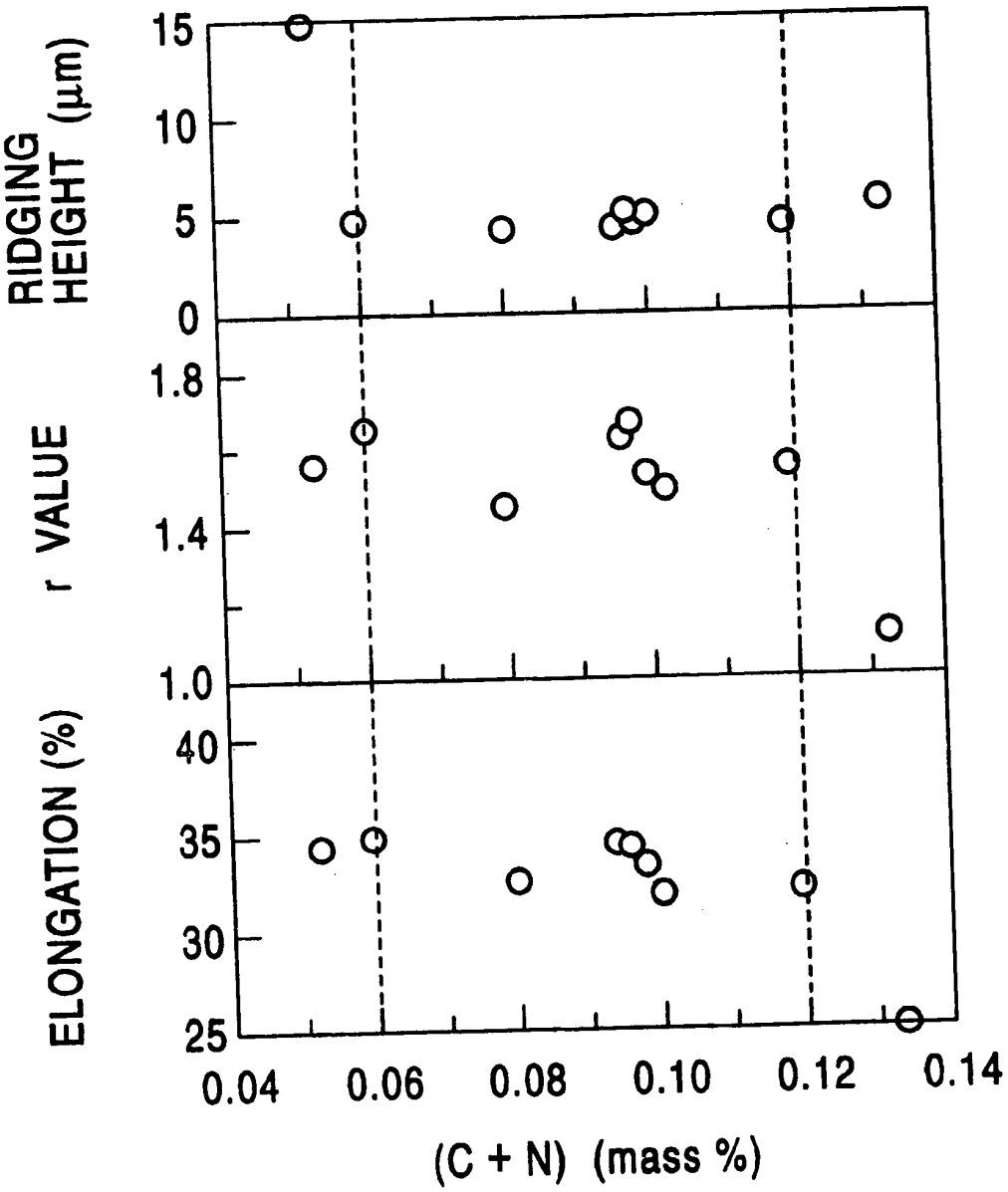

RIDGING HEIGHT (μm)
15
10
5
0
r VALUE
1.8
1.4
1.0
ELONGATION (%)
40
35
30
25
0.04
0.06
0.08
0.10
0.12
0.14
(C + N) (mass %)

FIG. 2

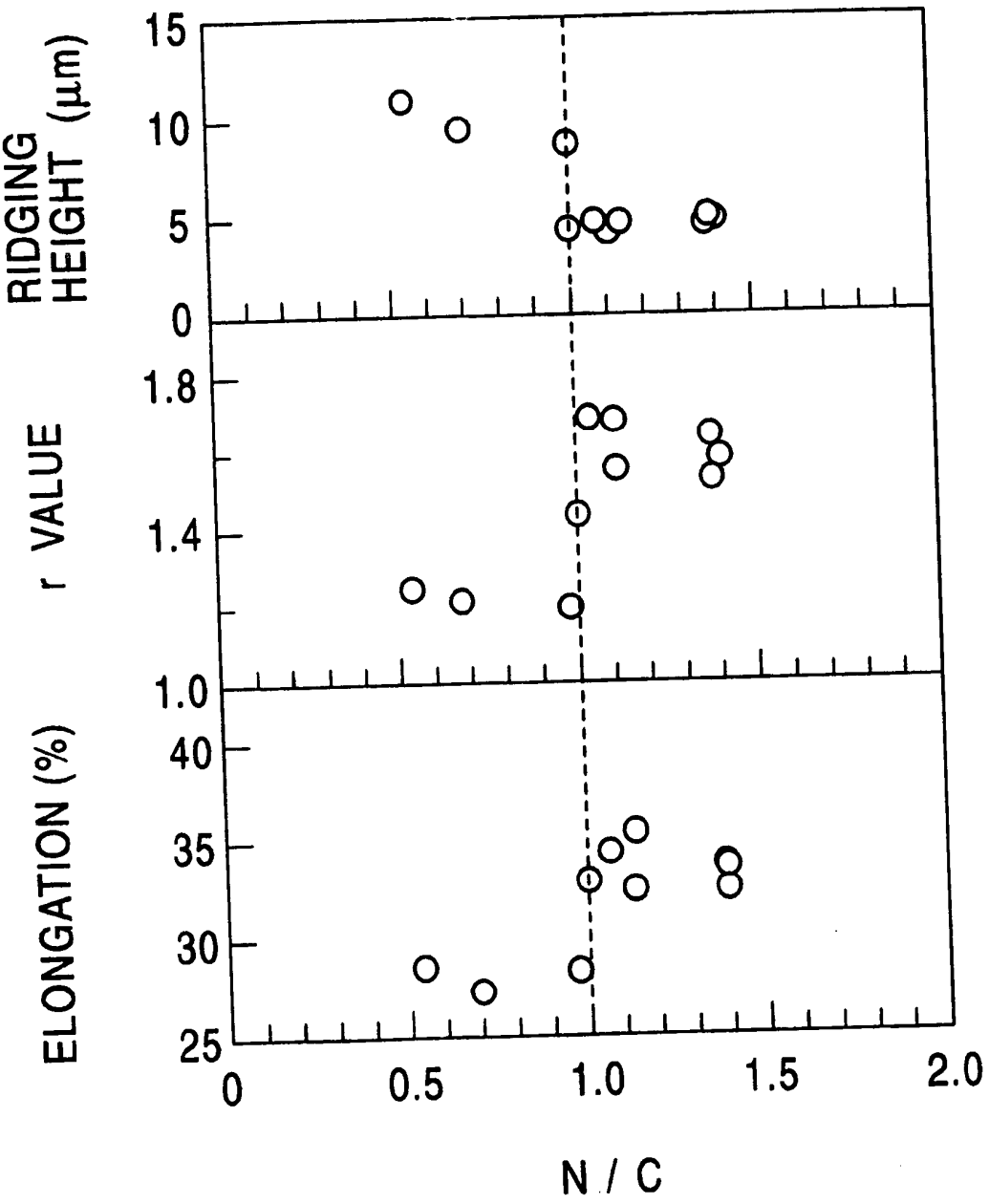

RIDGING HEIGHT (μm)
15
10
5
0
r VALUE
1.8
1.4
1.0
ELONGATION (%)
40
35
30
25
0
0.5
1.0
1.5
2.0
N / C

FIG. 3

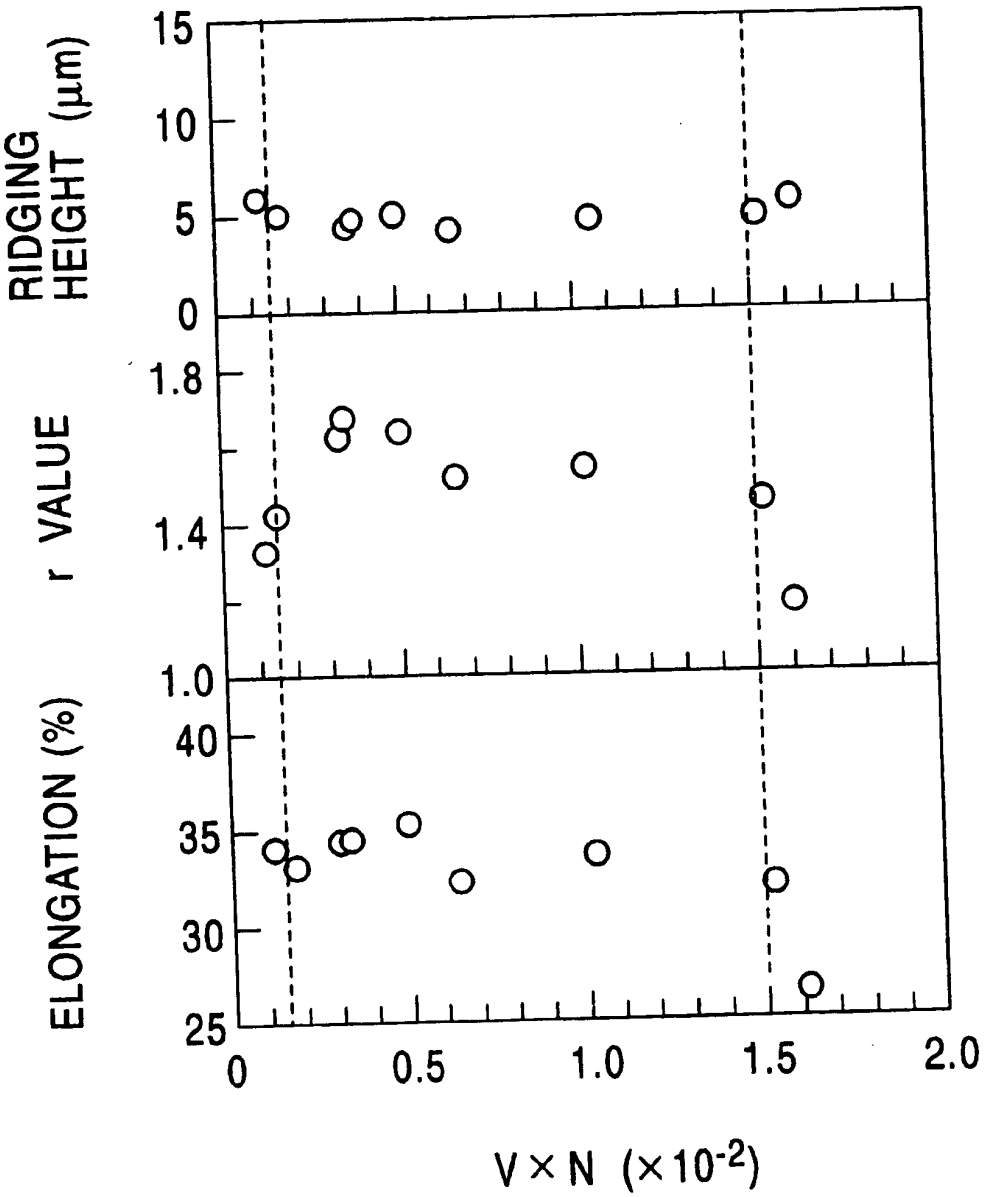

RIDGING HEIGHT (μm)
15
10
5
0
r VALUE
1.8
1.4
1.0
ELONGATION (%)
40
35
30
25
0
0.5
1.0
1.5
2.0
V × N (×10-2)

FIG. 4

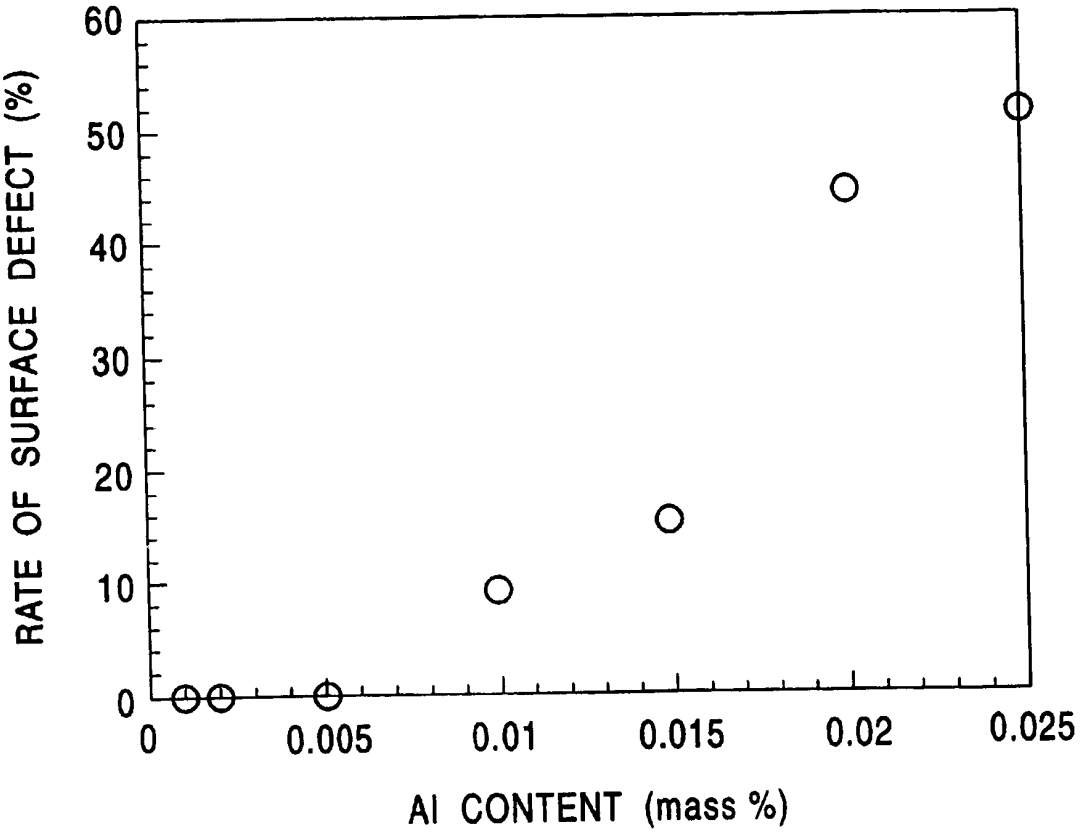
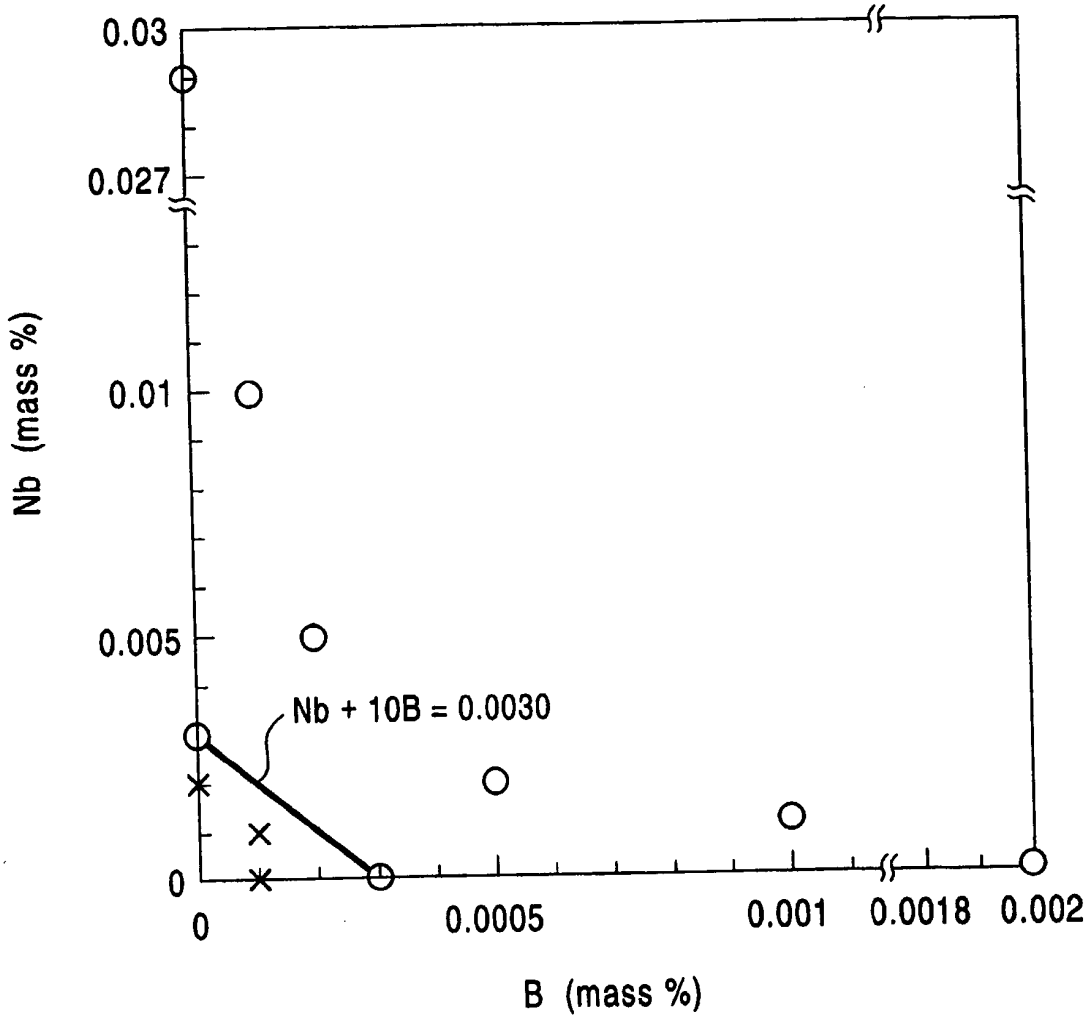

RATE OF SURFACE DEFECT (%)
60
50
40
30
20
10
0
0
0.005
0.01
0.015
0.02
0.025
Al CONTENT (mass %)

FIG. 5


0.03
0.027
0.01
0.005
0
Nb (mass %)
Nb + 10B = 0.0030
0
0.0005
0.001
0.0018
0.002
B (mass %)